HEALTH

EDITED BY

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Notes by the Way

"Health is the foundation of all our physical happiness."—*Herder.*

IT would seem probable that we are liable to contract serious disease from inhaling sewage-gases, even as these gases escape from the sewers into the fresh air of our streets. A police-constable, who had been placed on duty near an open sewer-ventilator, died recently in the Croydon Infirmary of typhoid fever. The source of infection was believed to be the sewer-ventilator aforesaid. The man must have breathed in typhoid germs which escaped from the drain, and was thus infected. There seems no reason to doubt that typhoid fever—which is pre-eminently the fever of the drains—may be caught in such a fashion; and the moral of this recital is that which teaches us, in any case, to avoid standing by sewer-ventilators or drain-escapes, wherever situated.

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THE vexed question of insanitary bakehouses is now likely to be dealt with in an effective manner. From time to time the public have been horrified by accounts of bakehouses which were enshrined amongst filth, and whose condition was simply deplorable from a sanitary point of view. The "Retail Bakehouses Act" lays upon rural and urban authorities the duty of seeing that bakehouses are kept clean, well-ventilated, and otherwise adapted for the sanitary conduct of the trade pursued therein. One important provision, at least, is contained in this Act. It is enacted that in any bakehouse which has been let or occupied since June 1 of last year, no closet of any kind shall communicate directly with a bakehouse. The cistern of the bakehouse is also to be distinct from that supplying the closets, and no drain or pipe, in connection with sewage, is to open in any way inside the bakehouse. With such ample provisions for securing the safety of the conditions under which "the staff of life" is prepared, we should hear less of the abuses to which of late years the baking trade, in respect of insanitary premises, has been liable.

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THE decease of Mr. Holloway, of "pill and ointment" fame, has given rise to not a few comments, kindly and the reverse, on the manner in which he attained his gigantic fortune. There can be no question that the practice of making and of selling a medicine which is "warranted" to cure diseases of the gravest kinds and of widely different natures is one highly to be deprecated. So long as the public are not educated in the common facts of physiology and health-science, and so long as people remain ignorant of the nature of disease, so long will quackery flourish, and so long will people pour medicines of which they know little into bodies of which they know less. All "patent" medicines are not to be classed, however, in the same category. There are medicines of this kind, the exact composition of which is a secret, and which are prescribed daily by physicians. But in such cases we do not find one and the same medicine "puffed" to death, and warranted to cure every ailment from cancer to indigestion, and from a headache to scrofulous disease. After all, it is the educated common-sense of the public which alone can prove their surest protection against quackery. Whenever people begin to understand that the cure of disease is a science—or rather a collection of sciences—and that no one substance can possibly be a panacea for every ill, they will refuse to swallow quack nostrums wholesale, and when ailing will take their medicine, as they take their law, from qualified sources.

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AN apt illustration of the obvious harm which the incautious use of "patent" medicines compounded of deadly drugs may effect, was afforded in London the other day, at an inquest held on the body of an infant seven months old. The child had suffered from whooping-cough, and a patent medicine, named "Holt's Specific" (formerly called "Hooper's"), was administered in teaspoonful doses, repeated every four hours. Four doses were given, the child dying after the fifth dose had been administered. Now, each dose was proved, by analysis of the mixture, to have contained half a grain of antimony, in the shape of "tartar emetic;" and the child was, therefore, found to have been poisoned by this drug. The coroner's jury remarked on the danger which attends the sale of such medicines, but it appears the law is powerless to stop such sale. The "Specific" was purchased from a woman who kept a confectioner's shop, and this latter fact only aggravates the evil, when we reflect on the wholesale distribution of poison which thus takes place. As an additional feature in the case, which seems to demand attention from legislators, may be mentioned the fact that a Mr. Curgenven, who gave evidence at the inquest, remarked that he had seen two children suffering from the effects of the same medicine. Death had resulted in one of these cases, while the other case had a narrow escape.

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A CORRESPONDENT of the *British Medical Journal* gives the following formula for making "alkaram"—a preparation much used, in the form of smelling salts, as a preventive of, and cure for, colds in the head:—Carbolic acid, eight minims; sesquicarbonate of ammonia, two drachms; powdered wood charcoal, two drachms; oil of lavender, six minims; compound tincture of benzoin, one drachm; strong liquor ammonia, a sufficient quantity. Mix well; keep in a stoppered wide-mouthed bottle.

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SOME interesting statistics have recently been given regarding the employment of blind persons. Out of a population of 26 millions in England and Wales, 23,000 persons are blind. Of these, 14 (including two females) are employed as officers and clerks in the Civil Service, two

blind persons are prison-officers, and four are employed, in some capacity or other, in the police-force. Twenty-eight blind clergymen are returned as employed by the Church of England. Over 500 earn a livelihood as musicans, and 156 are engaged in "washing and bathing" employments. Four hundred are returned as blind farmers, and 600 as agricultural labourers; 20 are commercial clerks, and 16 are commercial travellers. There are 800 blind basket-makers, and 300 costermongers and street vendors of articles want their sight; while the unoccupied blind, and those of no trade (including children under five years of age) number 14,000. It is added that about one in 11 of he total is given as the proportion of those born blind.

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WE have received a letter, in which the writer maintains that to cause warts to disappear it is only necessary to moisten them with the saliva or "water" of the mouth each morning—while the person so applying the saliva is fasting—when the excrescences will in time disappear. Now, the composition of the saliva is perfectly well known. It consists of water, a ferment called *ptyalin*, a little fat, and certain minerals. The use of the saliva, besides moistening the food and rendering swallowing easy, is that of converting the starch of the food into dextrine and grape-sugar. That saliva, of itself, contains no substance capable of exerting a destructive action on a skin-growth is perfectly clear. An ingenious commentator suggests that possibly some of the mouth acids, which are abnormally present where teeth are in a state of decay, might prove the means of affecting the warts; but this explanation is a little too far-fetched to be at all feasible. Our correspondent alleges that when warts have been regularly moistened, morning by morning, with the saliva of a person fasting, they have disappeared. We are therefore brought face to face, in our opinion, with another aspect of "faith-cures" or "expectant healing." We shall be glad to hear the experiences of any other readers of HEALTH on this point, which, of itself, is sufficiently curious to merit attention. But we would like to suggest that plain cold water should be tried in place of saliva as a wart cure. A friend of ours, placing a little water in a phial, presented the phial to a person troubled with warts, assuring him that the fluid—the nature of which was, of course, unknown to the patient—was a specific for the excrescences, and advising great care in its application, morning and night. The result was eminently satisfactory. The water was regarded as some mystic drug; the "faith-cure" was successful; and the warts disappeared. *Verb. sap.*

MILK is a sponge, and a dangerous sponge. It absorbs at once any deleterious matter, and is one of the most fertile causes of epidemics. In a paper by Mr. Hart, read before the Health Department of the Social Science Congress in Glasgow, he analyses fifty-three outbreaks of typhoid fever, seventeen of scarlet fever, and twelve of diphtheria due to milk. The milk epidemics in question had attacked in round numbers 3,500 with typhoid, 880 with scarlet fever, and 700 with diphtheria. These cases have all occurred within the last twelve years. Mr. Vacher, in a paper, says that nearly 100 epidemics have been traced to milk.

THE HOSPITALS ASSOCIATION.—The inaugural meeting of this Association will be held, by permission of the Lord Mayor, at the Mansion House, London, on Friday, February 1, at three o'clock. His Lordship will preside. Further particulars will be shortly announced.

Original Essays

"Life is not to live, but to be well."—*Martial.*

MEAT TEAS.

By M.D.

THE topic of "meat teas" does not at first sight appear to be an interesting or important one; but considering the common nature of the practice of combining dinner and tea, it seems worth while to direct attention to a recent deliverance on this subject. The habit of uniting dinner and tea to form the familiar "high tea," is greatly in force with many, who, unable to dine solidly in the middle of the day or in the afternoon-interval of the day, depend for sustenance upon the meal in question as a chief means of support at the close of the day's labours. Physicians and physiologists have always condemned "meat teas," on the plain ground that the combination is one difficult of digestion, and opposed to what may be called the natural chemistry of food assimilation. In the correspondence columns of this journal, the warning "avoid meat teas" has over and over again been given. It is satisfactory to find that Dr. James Fraser, in the *Edinburgh Chirurgical and Pathological Journal*, has been able experimentally to show that the warnings against the popular "high tea" may be founded on sure and scientific grounds.

To rightly understand the position assumed in such an investigation, we must remind our readers that amongst the chemical principles composing our bodies, and demanded by our bodies in the foods we give them, the *nitrogenous* or *albuminous* substances form a most important group. Albumen, represented by white of egg and allied substances (including the living matter, or *protoplasm*, of our frames), forms at once the type of these nitrogenous compounds, and of the chief "flesh-forming," or, as they are also called, "nitrogenous" foods. Such foods consist of four elements—to wit, carbon, hydrogen, oxygen, and nitrogen. Dr. Pavy, in his classic work on foods and digestion, remarks that all bodily work is associated with the consumption, elaboration, and breaking-down of nitrogenous foods. Nitrogen appears to be that element in our food on which depends the due regulation, substance, and energy of the most living parts of our bodies. Although plants possess nitrogenous compounds as part of their chemical belongings, and although some plants feed, like animals, on a dietary which includes a large amount of nitrogen, yet the vegetable world, on the whole, does not so markedly depend on nitrogenous foods for support as does the animal creation.

The food principles which contain nitrogen are represented by such substances as the *casein* of milk and cheese, the *gelatin* of bones, the *fibrin* of blood, the *gluten* of flour, &c., in addition to white of egg (or ordinary *albumen*) wherever found. Albumen itself, derived from animals or from plants, is thus, in plain language, the representative of a family of substances which, though not capable of supporting our frames by themselves, nevertheless constitute the chief group of foods demanded for our support. The second class of our foods is, in fact, called the *Non-nitrogenous* division, because the element nitrogen does not enter into the composition of this group. In the latter division we include the starches and sugars, the fats and oils, water, and mineral matters. Starches and sugars, together with fats and oils, consist of carbon, hydrogen, and oxygen combined in different proportions; water consists of hydrogen and oxygen alone; and the minerals (lime, potash, soda, iron, &c.) necessary for the

support of life possess, of course, their own and characteristic composition.

When we take such a fluid as beef-tea or beef-essence we receive a substance whereof the nutritive part is chiefly albuminous or nitrogenous in its nature. Such fluids (and the same remark holds good of flesh itself) consist besides, of water, minerals, and fats, but it is to the nitrogenous parts of them that we look for the pure nutritive result involved in their digestion. Hence the interesting question raised by Dr. Fraser in his recent communication may be practically stated as involving the question: "What are the effects of the common beverages of life on the albuminous substances which, in the varied forms of meat, fish, &c., we habitually receive?" The common beverages in question are, of course, primarily, tea and coffee, and to the list must be added cocoa and cocoatina. In tea and coffee, as is generally known, there is, practically, no nitrogenous matter, whereas cocoa does contain such material. Tea, coffee, and cocoa, however, owe their stimulating properties to the presence in each case of a special principle, called *theine* in tea, *caffein* in coffee, and *theobromine* in cocoa. It may be said, indeed, that it is for the effect of these substances on the body that we value these beverages. In their own way, they are highly important additions to our list of food resources; and it is, therefore, of the utmost importance that we should know how to utilise them to the fullest advantage, and to avoid their employment in any way or fashion by which their utility is impaired.

Dr. Fraser tells us broadly that tea, coffee, and cocoa all retard and interfere with the digestion of albuminous or nitrogenous substances, except in four cases. He finds, for example, experimentally, on the favourable side of the "meat tea" question, that coffee does not appear to delay the digestion of ham, and that the digestion of white of egg is not interfered with by this beverage. Again, he informs us that the nitrogenous parts of that highly-important article of diet, fish, digest amicably and peaceably enough along with both cocoa itself and with cocoatina. The practical outcome of these observations would, therefore, seem to consist in the remark that the ordinary breakfast habits of the nation in taking fish along with cocoa, or ham and egg with coffee, are justifiable from a physiological and chemical stand-point. The presence of salt in meat, curiously enough, was found to prevent digestive delay, in the case of meat and the common beverages above noted being taken together. Again, concerning the degree in which the beverages act on foods which may be taken with them, there seems to be certain important variations. Cocoa is found to retard digestion most; tea comes next in order; while coffee is the least injurious in this respect. No less interesting is the observation, that the addition of cream and sugar seems to increase the injurious effect of cocoa on digestion, while such addition reduces such action in the case of tea. The latter beverage is credited with causing flatulence, and, as physicians know only too well, is responsible for a vast deal of the digestive trouble which stalks abroad amongst the working-classes especially.

The practical lessons deducible from Dr. Fraser's experiments are of extreme value. In the first place, they teach us broadly that "meat teas" are a mistake, and that those who indulge in these meals are liable to qualify themselves for indigestion produced by the plain chemical considerations already detailed. In the second place, we learn that fresh meat especially should never be taken along with tea, coffee, or cocoa, seeing that the influence of these beverages on this latter description of food is highly marked and of distinctly injurious character, in so far as healthy digestion is concerned. A third point of importance deserves to be noted, however, in the fact that the practice of taking coffee or tea immediately after dinner is probably deleterious, or at least, can serve no good end in expediting digestion—the practice in question, it might be added, however, has probably a more intimate relation to the correction of the effects of wine, than to the stimulation of digestion. A fourth piece of advice may, lastly, be tendered, to the effect that we should bear in mind that tea, coffee, and cocoa possess their own value and special use as beverages. Tea and coffee are mere adjuncts to food—they are not foods in themselves. They may be taken in moderation by those who are well nourished otherwise, but should never be drunk along with meat. Cocoa (with milk and bread) constitutes of itself a nutritious dietary; seeing that it contains nitrogenous matter of its own. The great lesson, however, to be borne in mind is, that we should not associate the beverages in question with meat, and with the more solid meals of the day.

A SIMPLE METHOD OF PRODUCING LOCAL LOSS OF FEELING.—Dr. Cheize relates a simple procedure adopted by him in a case of ingrowing toe-nail, requiring immediate operation, at a time when he had no apparatus at hand. He saturated a little piece of lint with ether and placed it on the toe. He then projected the air from an ordinary pair of hand-bellows upon the lint until the ether was evaporated. This was repeated two or three times, when anæsthesia was so complete that the nail was removed without the patient's knowledge.

THE DISEASE OF THE MONEY-COUNTERS.—A Washington correspondent, visiting the Treasury Department, noticed that many of the women employed in counting bank-notes looked ill, and had sores upon their hands or heads. The superintendent gave the following account of the trouble. "Very few," he said, "who spend any considerable time in counting money escape the sores. They generally appear first on their hands, but frequently they break out on the head, and sometimes the eyes are affected. We can do nothing to prevent this. All of the ladies take the greatest care of themselves in their work, but sooner or later they are afflicted with sores. The direct cause of the sores is the arsenic employed in the manufacture of the money. If the skin is the least abraded, and the arsenic gets under the flesh, a sore will appear the next morning. The habit that every one has of putting the hand to the head and face is the way the arsenic-poisoning is carried to those portions of the body. "See, here," said Mr. Rodgers, stopping by the side of a young lady, and picking up a glass vessel containing a sponge, "this sponge is wet, and is used to moisten the fingers while counting the money. You see how black it is. That's arsenic. Every morning a new piece of sponge is placed on the desk of each employée, but before the day is over it is as black as this. I have known half-a-dozen cases where ladies have been compelled to resign their positions. There are three ladies who were here six years before they were afflicted with sores. About three months ago they were so visited by them that they had to quit work. They have been away ever since, and the physician's certificate in each case says that their blood is poisoned with arsenic."

"LOCHINVAR" OLD SCOTCH WHISKY.—For invalids who are ordered whisky, or for those who use this valuable spirit to promote and aid digestion, it is important that the whisky *be well matured by age*. The "Lochinvar" is a blend of the finest Highland whiskies, and is *guaranteed five years old*. Sold by all wine merchants. Wholesale only of HILLS & UNDERWOOD, Eastcheap, London.—[ADVT.]

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

OUR USEFUL NOTE-BOOK.

"When found, make a note of."—*Captain Cuttle.*

To Remove Hairs.—Sprinkle over 100 parts of good quicklime, about 50 parts of hot water, and, when slaked, triturate with 200 parts of cold water. Place in a suitable flask, and pass into it the hydrogen sulphide generated from 200 parts of sulphide of iron and 200 parts of sulphuric acid gradually introduced into the generator. This preparation must be immediately placed into small vials, and securely sealed; but even then it will lose its virtues after a few weeks. This was originally recommended by Bœttger, but is sometimes known as "Martin's Depilatory." This paste is to be spread over the hairy skin to the thickness of one-sixteenth of an inch, and allowed to remain for ten minutes, when it is to be removed with a wet sponge. When allowed to remain too long, bad sores are apt to result. Another, known by the Turkish name "Rusana," is composed of 50 parts of quicklime, 30 parts of starch, and 5 parts of orpiment. This is to be made into a paste with water, and employed in the same manner as the foregoing. Of late years dermatologists have resorted to a method for removing hairs which is less likely to be followed by disfigurement, and is more radical in its effects, though involving more labour, and requiring the aid of a skilful person. A fine platinum needle, mounted in a suitable handle, serves as one electrode for a galvanic battery, the other electrode being a moistened sponge. The sponge is placed upon any convenient part of the body, and a single hair, being grasped with forceps, serves as a guide to direct the needle to the bottom of the hair follicle. After the needle has been introduced, connection of the galvanic circuit is made, and, after a few minutes, the root of the hair is destroyed by electrolysis, as shown by the escape of gas and by loosening of the hair, which comes away in the grasp of the forceps.

Cleansing Glass Vessels.—Alexander Müller, of Berlin, after speaking of the various methods in vogue for cleaning glass vessels, as, for example, sand (which is objectionable, as it scratches glass), shot (good, but should be followed by a wash of dilute nitric acid, to get rid of lead), brushes, copper scale (also good, but requires subsequent rinsing with some dilute acid), bits of paper or linen, wood ashes, salt (especially rock-salt), gypsum, and marble-dust (very good), ground bones (likewise excellent), he concludes as follows:—Chisel or tongue-shaped pieces are cut from thick pieces of india-rubber, and a sharp brass or platinum wire is fixed into the thick end to serve as a handle. With this washer and its flexible handle, we are able to "lick" out, to a certain extent, any kind of a bottle. For beakers and capsules, we greatly prefer it to the hair pencil and feather commonly used; for, owing to their fibrous structure, the precipitate gets entangled in them, while they also lose some of their nitrogenous particles, which would affect the accuracy of careful nitrogen determinations, as, for example, in water analyses. Finally, to clean glass or porcelain vessels from the greatest variety of adherent organic substances, he recommends a mixture of bichromate of potassium and sulphuric acid as superior to ether, alcohol, benzin, &c.

"Pain-Killers."—From 100 parts of capsicum make 600 parts of tincture; add a solution of 22 parts of soap in 100 of water; add thereto water of ammonia, 300 parts; camphor, 30 parts; oil of rosemary, 10 parts; oil of lavender, 10 parts; oil of thyme, 10 parts; oil of cloves, 10 parts; oil of cinnamon, 1½ parts; sugar colouring, q. s. Mix and filter. Another "Pain-Killer" is made as follows:—Myrrh, 2¼ lb.; capsicum, 10 oz.; opium, 8 oz.; benzoin, 6 oz.; guaiac, 3 oz.; camphor, 10 oz.; alcohol, 5 gals.

To Preserve Fruit fresh for a long time—it is said for years—it may be placed into sand which has previously been carefully washed, dried, and then dampened with cognac. Care must be taken that the fruits, which should not be overripe, nor unripe, do not approach each other too closely. The earthen or wooden vessel in which the sand is contained must be kept well covered in a place which is neither too damp nor too warm.

Preserving Indiarubber Goods.—U. Kreusler, of Bonn, and E. Budge, of Constantinople, have obtained a patent for a mode of preserving rubber goods from hardening and cracking, which consists in steeping them for about a minute in melted paraffin, and drying in a room at a temperature of about 100 deg.

To Clean Brass Scale-Pans.—Pour sufficient ammonia in the pan to cover the bottom, and rub briskly till dry with a handful of dry pine sawdust. For very dirty pans, take about a drachm of bichromate of potash, powder it in a mortar, mix it with two or three times its bulk of concentrated sulphuric acid, and add twice as much water. With this rub the pans (having a care for the fingers), rinse well, and finish with rotten-stone.

MORE ABOUT KOLA NUT.

(THE CURE FOR DRUNKENNESS.)

In the Bulletin of the *Société Géogr. de Marseille* for June, Heckel gives new information, with a *résumé* of old, in regard to the African nut known as Kola, or Guru. This seed, which is hardly to be called a nut, has a kernel about two inches in length, somewhat like that of a peanut, with a groove instead of a projecting point at the germinal end. It may be white or red, or both, to the number of four or five in the same rough brown pod. It is the product of a tree of the family *Sterculiacea.* The genus has been called Sterculia, Kola, &c., and there are several species or varieties. This nut, or seed, is remarkable on account of containing (besides glucose, tannin, and a bitter principle) caffeine and theobromine (the principles of coffee and cocoa) in large proportion. Among the African tribes it takes the place of tea and coffee or cocoa — products of plants belonging to very different groups, but valued for the same essential principle. It has been used from time immemorial, and many singular stories have been current as to its effect upon the system, though little authentic information was at hand.

Kola is gathered twice a year, carefully shelled, and the bare meats are immediately despatched into the interior; carefully wrapped in green leaves to insure them from drying. They have to be carefully picked over every twenty or thirty days, and all defective ones thrown out. It is considered very important that they should be kept fresh and somewhat moist. However, as soon as they begin to shrivel and dry up, the caravan merchants dry them thoroughly in the sun, and pound them to a powder in a mortar. The seeds are worth twenty or thirty cents a pound at the place where gathered, near Sierra Leone; but they rapidly increase in value away from the original market. At Goree a single seed will be sold at six to ten cents, according to the state of the market. In the interior

the tribes on the Niger pay as high as one dollar per seed, and in times of scarcity a slave has been given for one seed. In the far interior, the Arab merchants frequently dispose of the powder for its weight in gold-dust.

The Kola is the stimulant of the African tribes, and is in order on every occasion. Among those peoples where the nut is not indigenous, nor yet too extravagantly dear, no transaction of any moment can take place without an exchange of Kolas. This is either in token of good-will or to "bind the bargain."

If two tribes ally themselves, they exchange white Kolas, this colour being always the token of good-will and peace. If war is declared, the announcement is made by sending red Kolas to the enemy. A request for a wife is accompanied by the present of a white Kola from the lover to the intended mother-in-law. The response favourable is by a seed of the same colour; a refusal, by a red one. The wedding present of the husband to his bride is incomplete without a certain proportion of Kolas. In the interior, where they are so valuable, the gift of one is considered a high attention, and, when given by a chief to a white traveller, takes the character of an assurance of protection. One of the chiefs of the Upper Niger sent Zweifel and Mousteir red Kolas wrapped in green leaves, as a sign that they would not be permitted to ascend certain sacred water-courses included in their programme.

In religious and judicial proceedings they are equally important. All oaths are taken on these seeds: the witness holds his hand over them, swears, and then eats them. An accuser demanding justice brings to the judge a little basket of rice with four or five Kolas upon it. The sorcerers lay great stress on the attractive qualities of this seed in drawing away evil spirits, sickness, and misfortune. Friends place with the dead some Kolas, that he may safely endure his "long journey;" and, to crown all, the Mahometans declare it to be a fruit of divine origin, brought to earth by the Prophet himself.

The nut is chewed as if it were tobacco; the powder is eaten. The taste is sweet, astringent, and bitter in succession. Europeans as well as negroes are devoted to it. It not only sustains the system under the greatest fatigues, even without food and for long periods, but it is also a certain preventive of the dysenteries and deadly fluxes which render that region so unhealthy. The powder makes foul water drinkable and harmless.

Messrs. Heyman & Phillips, 15, Clifford-street, London, W., supply the nut for medical and other purposes.

OWING to his hard life, the conflict with his circumstances, and his want of foresight, the Eskimo soon becomes a physiological bankrupt; and, his stock of vitality being exhausted, his bodily remains are covered with stones, around which are placed wooden masks, and articles that have been useful to him during life; or they are covered with driftwood, and the weapons and personal effects placed near by, in response to the sentiment commemorated by Schiller in "Bringet hier die letzten gaben."

SANITARY INSPECTIONS.—Fee for Survey and Report, in London, 2 Guineas. Estimate given and Improvement Works carried out when required.—THE SANITARY ENGINEERING CO., 115, Victoria-street, Westminster, S.W.—[ADVT.]

WEST GREEN, TOTTENHAM, WEST GREEN COLLEGE FOR LADIES.—The Principal, MISS BRISTED, A.C.P., receives young ladies to board and educate in a thorough English education. Good schoolroom, furnished with all improvements in lighting and ventilation. Separate Swedish desks. Scientific gymnastic classes held twice a week. The pupils' studies are varied by frequent change of occupation and physical exercise. MISS BRISTED'S pupils have been very successful in the local University examinations. Good garden and tennis-court. Prospectus on application.—[ADVT.]

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

FROM SUPERSTITION TO HUMBUG.

UNDER this title our excellent American contemporary, *Science*, has the following sensible remarks on the relations of superstition to charlatanism:—

"It is related that especially fortunate English commanders in India have encounted a tendency among the ignorant natives to exalt them as more than human beings. It is not strange that a benighted and superstitous populace, astonished by exhibitions of power to it incomprehensible, should, for a time, turn from its own hazy gods to new and visible wonder workers. A somewhat similar revolution appears to accompany the progress of physical science. What its friends have to contend with at present is not so much indifference or hostility, though these are not altogether lacking, as a too implicit and childlike confidence in the efficiency of scientific knowledge on the part of those to whom its ways are in the main unknown. The real conquests of science have been so vast and unexpected, so much like the workings of magic, that people eagerly pay their homage to a power which, though mysterious enough to engage their credulity, accomplishes every day feats that witches, ghosts, and magicians performed only upon rare occasions. A genuine scientific man will disdain to abuse this confidence; but there are always camp-followers of the scientific army who will find in it their opportunity. It is curious to see how those who a generation or two ago would have been the believers in witchcraft and all things 'supernatural,' are now turning to be caught in the toils of scientific charlatanry. The wizard of the present day is an electrician. Electricity and magnetism have become literally words to conjure with.

"There is a certain progress in this, though not in itself a valuable progress. It is the advance from sheer ignorance to that little knowledge which is proverbially a dangerous thing. It is the advance from pure superstition in which men did not reason at all, to humbug, in which they reason from false or insufficient premises to wrong conclusions. It should be said in justice to the scientific charlatan, that he is frequently not dangerous, and is nearly always amusing. He possesses an audacity, a volubility, that, combined with his habit of blundering, make him a far more cheerful person to contemplate than his gloomy predecessor, the sorcerer. Take, for instance, the modern master of that ancient black art of divination by rods. A newspaper report makes a 'professor' of the science of 'magnetic geology,' as he calls it, speak as follows:—

> You take the ends of the forks and grasp them tightly in either hand, allowing that portion where the forks join to point upward. . . . When one walks over a mineral substance in the ground, the electricity ascends through the body into the hands and rod, and draws the central or connecting portion of the rod downward. When this occurs, minerals exist beneath the spot where you stand. If the rod begins to move as the person walks along, take particular notice of the spot where you stand when the movement begins. When the rod turns completely over, measure the distance from where it first began to move to the spot where it indicates minerals. This distance will give you the depth at which the mineral can be found.

"'Rabdomancy, or divination by rods, is as old as history,' some one recently remarked. The feature of this science peculiar to our age is the pretence of explaining it. That the method is still resorted to quite widely there can be no doubt. We read in a Vermont paper that a few

months ago the public authorities of Middlebury resorted to the rod when about to sink an artesian well. They then sank a shaft eighty feet at the spot designated, and there struck, not water, but flint. We have lately heard of a man who ascertains by the divining-rod the proper spot for grounding lightning-rods. We have never seen a statement of his theory in his own words; but it appears that he holds the doctrine that atmospheric electricity follows, or is controlled by, the course of underground electric currents. He claims, moreover, to be endowed with a peculiar sensitiveness that enables him, by walking over the ground with the forked stick in his hands, to detect the location of these currents. The last touch is given to this theory by the statement that it is necessary for the gifted manipulator of the rod to wear rubber boots during the operation of divining, in order that he may be insulated from the ground.

"In regard to the human body and the remedies for its ills, people have always been superstitious; and so, naturally enough, the number of 'electric' and 'magnetic' nostrums offered to afflicted humanity is very great. Their descriptions, however, are nearly always worth reading. Custom cannot stale the infinite variety of their absurdities. Here is a specimen which came to hand a few days since in the advertising columns of a college paper :—

> Labour, study, and research in America, Europe, and Eastern lands, have resulted in the Magnetic Lung-Protector, . . . which, . . . with the continuous stream of magnetism permeating through the afflicted organs, must restore them to a healthy action.

"There is a class of people who call themselves magnetic physicians—people who cure, in a modern way, by the laying-on of hands. They are apparently closely allied to the spiritualistic mediums, and evidently intend to use something more than a figure of speech in calling themselves magnetic. There is, for instance, in or near San Francisco, a certain Dr. H——, who gives people what he calls magnetic baths. He claims to magnetise the water for the baths by dipping his hand in it. He is said to have an extensive practice. We have heard that the notorious Slade, whose feats made such an impression upon Professor Zöllner, claimed to possess a literal magnetic power, enabling him to rotate the plane of polarisation of light.

"Whatever may be the case with these peculiar people, it appears that others, not especially superstitious, do believe themselves particularly endowed or charged with electricity, because, for instance, they succeed in drawing sparks from their hair or clothing during cold weather. Of course, some people do have drier hair, or drier skins, than others, and do, therefore, as frictional electric machines, surpass the majority of their fellow-mortals. Moreover, physiologists believe that in living bodies there exist slight electric currents capable of being detected by very sensitive apparatus. But apparently it is not with any intelligent reference to these exceedingly minute currents, or to an electric charge acquired by friction, that a man speaks when he offers to rub a weak or disabled arm because he is 'strong and full of electricity, you know.' The fact is, we do not know, and we wish the man would explain.

"It would appear that such terms as 'animal magnetism' and 'personal magnetism,' originating, no doubt, in metaphor, are sometimes taken almost literally. We have met one or two very intelligent people who seemed to have a vague idea that psychological problems might be attacked by means of the laws of electricity and magnetism. This list of frauds and delusions might be greatly extended. Enough has been said, however, to illustrate some of the kinds of error into which people are led by their ignorance of the results and methods of scientific research. The need of a wider and more intimate knowledge of physics in the education of all classes would, do doubt, be generally acknowledged. It should be observed, however, that the kind of half-knowledge of this subject, which is frequently obtained from newspapers, and even from public lectures and popular scientific books, is the very pabulum of such errors and humbugs as we have described. A woman hears a lecture on sympathetic vibrations, fundamental tones, &c., notes the trembling of a church under the music of the organ, and writes to her religious paper an enthusiastic letter explaining the fall of Jericho in a scientific manner—and all in the interests of revealed religion.

A man reads, or sees in a public hall, that two electrified pith-balls attract or repel each other. He learns that the human body may be charged with electricity. Straightway he begins, upon this basis, to explain the table-tipping feats of spritualistic mediums—a gross error hardly more respectable than the pure superstition of the veriest believer in ghosts. To make such errors impossible would require that definite, familiar knowledge of things in their quantitative relations which is hardly to be obtained without actual contact. It would require a laboratory training; and it is perhaps impossible to make provision for a very extended training of this sort in any scheme of general education.

"The tendency of the times, however, is toward the objective and experimental in teaching; and it is probable that the next few years will see considerable changes in the methods of general instruction in physics."

A correspondent of *Science* writes :—"Your editorial in Nov. 16 issue of *Science* might very appropriately have contained an account of the 'magnetic springs' which underlie this portion of the State of Ohio. From my residence three of these springs may be seen, at one of which a large bath-house has already been erected, where, during the present season, an average of forty patients daily tested the curative effects of the waters. These springs are found along the bank of a small creek and at the base of a valley, perhaps twenty-five feet in depth. The water, which contains less than a sixth of one per cent. of iron, is brought to the surface of the ground through an *iron* gas-pipe, and 'becomes so highly charged with magnetism that it will impart its properties to a knife-blade.' The village of Magnetic Springs, a few miles distant, has several large hotels, all of which are so crowded with guests that rooms must be engaged weeks in advance. Change of residence, rest, and good nursing have together effected a number of cures, all of which, of course, are ascribed to the magnetic properties of the water. Many of the guests return to their homes as disappointed as the little girl who, after drinking a glass of the water, said, 'I do not feel one particle magnified, and I think these springs are a humbug.'"

POWNCEBY'S PURE WINES AND BRANDIES, as analysed, and especially selected to suit medicinal purposes, may be obtained in small quantities at wholesale prices. Free delivery within fifty miles. Circular and price current by post from POWNCEBY & Co., Wine and Brandy Importers, 183, Oxford-street London, W.—[ADVT.]

PRIZE MEDAL NATIONAL HEALTH SOCIETY.—HOUGHTON & Co., Practical Plumbers, Inspect and Report on House Drainage. Improvements carried out with all the best and latest inventions. Estimates Free. 21, Sloane-terrace, S.W. Established 1863.—[ADVT.]

BARNES'S IMPERMEABLE OPIUM POULTICE, an effective and perfectly safe application for relief in neuralgia, gout, rheumatism, painful swellings, and lumbago. Prices by post 1s. 3d. and 2s. 5d. 1 and 2, Trevor-terrace, Knightsbridge, S.W.—[ADVT.]

FEEDING AND LEARNING.

WE commend the following remarks to School Boards, teachers, and parents :—"However we may approve of the Education Act of 1870 and its subsequent amending Acts, there is no doubt a fair case to be made out against the over-stringency of the Revised Code. We may take as evidence of this the letter of the National Union of Elementary Teachers to their lordships of the Education Department, lately published in the *Times*. The overtaxed child learns like a parrot; the overtaxed child, who is also very poorly fed, learns, we should be inclined to think, not at all. But to feed the unfed children on a large scale on charity would be a gigantic mistake. The struggling housewife would naturally, and, so to speak, rightly—as the choice is offered her—send her child to school unfed, and carry the difference to the credit of the week's account for expenditure in some other, perhaps more harmful purpose. The drunken, feckless, and weak would let their children get what they could of others and be thankful. And there are many other reasons. The question is whether, by less stringency in the educational requirements, the children would not learn more, be educated more, though, perhaps, instructed less; and then, whether simultaneously some plan of feeding those that require food is not possible on an ordinary self-supporting plan. This has succeeded (less cost of plant and management) out of London; why should it not be tried here on an entirely self-supporting basis? At Rousdon, Devon, Sir Henry Peek has arranged, since October, 1876, to provide for a school of 79 children. The average of solid food per child was almost eight ounces. Ten dinners have cost, on an average, 1s., including cooking, expenses and wear and tear. The girls assisted in the cooking, which was part of the curriculum of the school. The result is reported to have been most satisfactory, physically and educationally. At Farnell, also, a country parish near Brechin, with a population of 600, a hot mid-day meal of pea or potato soup, or Scotch broth, has been provided for six winters. The "plant" was purchased by voluntary subscriptions. The charge is ½d. per child, or 1d. for two. The supply is not restricted to a single bowlful. There was, at the end of last winter, a balance of 5s. 3½d.; but gifts of vegetables, value £10, were given, and the School Board were paid the cost, £3. 5s. The results, too, in this experiment are said to have been very satisfactory. In London the numbers would be larger. The demand for so many scholars' meals daily would be regular. The bill-of-fare need not be very often altered. A cocoa-house in a by-way, close to the school, might supply the breakfast of hot drink and a slice of bread. If other meals have to be provided, other similar arrangements might be made. Children often take their mid-day meal with them. The most shiftless parents give their offspring a penny or twopence, when to provide the breakfast regularly in comfort and at an early hour would be a moral effort beyond them. Many pennies are wasted in sweets—and worse—that might go in cheap meals, if there were a supply. At least, the experiment is worth trying. If it fail, it does not follow that the meals must be given in charity. The desired result might follow from indirect methods. The establishment of day industrial schools would provide for a certain class of children, not now touched. More stringent laws against habitual drunkards who neglect their families might provide for another class, by their admission to Poor-law schools; penalties and payment might be enforced against the parent, or he might be shut up in an inebriates' workhouse or other institution. To give the School Board powers to have additional infant-schools, with arrangements by which the younger children could be cared for during the day, and the money earned by father and mother thus expended directly on their maintenance, would reach another class. If the School Management Committees of the Board were a reality in all poor localities, their influence might do something. There is a real evil. The children are over-instructed and often underfed. The Educational Department can remedy the former by itself; the latter is no business of any educational authority. The social reformer should fix his attention on its difficulties, study, and solve them."—*British Medical Journal.*

PURE WATER is such a vital necessity that, without it, illness is certain. None are more prone to the ill effects when impure than the young. To ensure a pure supply send a post-card to the LONDON AND GENERAL WATER PURIFYING COMPANY, LIMITED, 157, Strand, London, W.C., who will return particulars post free.—[ADVT.]

FOR country houses, hotels and isolated residences in general, the best and most successful plan for the disposal of sewage is to collect it in a closed cistern and discharge it periodically through a flushing tank, into a series of small tile-pipes laid to a gentle grade from 8 to 12 inches below the surface. By extending the tiles over a sufficient area and allowing from 40 to 70 feet of tile for each person, a complete absorption of the sewage takes place by the action of the atmosphere and roots.

PETROLEUM IN THE CAUCASUS.—According to the British Vice-consul at Batum, Mr. Peacock, the oil-region of the Caucasus covers some 1,200 square miles. The most productive locality is the Apcheron peninsula, where the wells far exceed those of Pennsylvania. The total production has risen from 500,000 barrels in 1873 to about 4,000,000 barrels in 1881. The export from Baku has increased at the rate of 1,250,000 barrels in two years. According to the daily papers, a pipe-line is projected from the oil-region to Baku; and the American producer must rely on the quality of his product, rather than on its cheapness, for the future of our export trade.

THE WEIGHT AND GROWTH OF INFANTS.—The proportion between the age, weight, and height of infants has a bearing on successful nursery management of much the same import as that observed all through the period of childhood. The rapid rate of increase in the earlier months of infancy, and the variations which are then observable, make a separate study of this period essential. A vigorous healthy child should double its birth-weight in the first four or five months, and treble it at a year old. This rate of growth is not uniform, nor does it proceed at any steadily-decreasing ratio, but is subject to the variations shown on the diagrams farther on. The loss of weight marked in the first few days is constant; it is not owing to the want of nutriment or to the kind of supply given. The most appropriate ingesta are those which aid the clearance of waste material from the bowels and kidneys. If the infant wets the napkin freely it is receiving all it needs in the way of fluids, and at this time the proportion of solid matter to be passed is increased tenfold. A week later, with six times as much urine voided, only half this active waste is evidenced. The natural period of most rapid growth comes to a pause about the fifth month in healthy children, when the teeth are forming, and a further demand on the nutritive supply is made. Care has to be taken lest this pause be unduly prolonged, and a downward tendency advance to positive illness. We see also the first increase of weight checked as growth increases, so that some processes may be less active while a new direction is given to healthy development. Still, for infants under three years of age, weight is the best criterion of progress.—*Dr. Squire in "Healthy Homes.*

Recreation and Health

"Health is the vital principle of bliss,
And Exercise of health."—*Thomson.*

PHYSICAL EDUCATION IN AMERICA.

BY D. A. SARGENT.

(*From the "North American Review."*)

FIFTH AND LAST PAPER.

WHEN boys come from the fitting school equally prepared in body and in mind for the duties before them, it will then do to talk of making our higher institutions of learning training schools for the intellect alone. But, while they are filled with students whose minds have been forced and "crammed" in order to build a reputation for masters and tutors; while class after class enters college well grounded in the classics and totally ignorant of the first principles of physiology and hygiene; while hundreds break down yearly for the want of physical stamina; while precarious health is the rule and a sound and vigorous constitution the exception, it is little less than criminal folly to talk of such a course. The body must be cared for, and when and how are the only questions open for discussion. If our preparatory schools were more generally patronised, and more liberally furnished with appropriate appliances, we should say that here was the field for physical training. But under present conditions the work, if done at all, must be done in college; and in college the first essential is to put this work on an equal footing with every other. If attendance at chapel or recitations is required, then attendance at the gymnasium should be insisted upon. Make this one of the stated requirements, and the student will look upon it as upon any other college duty. The great majority of students are disposed to do what is thought to be best for them, and the complaint arises—when complaint is heard—from a failure on the part of the faculty or the managing boards to make provision for regular advancement in the exercises which they have introduced.

To keep a class drilling from two to four years with wooden dumb-bells and Indian clubs only is as great a mistake in a scheme of physical education as it would be to confine the same class exclusively to the study of geometry, with a view to giving them a thorough mental training. Such exercises are elementary in their nature, and in a prescribed course they should precede all others. But, after they have done their work, which is to supple the joints, rather than to develop the muscles, the student should be allowed to go higher. A change is necessary, not only to meet the demands of increasing strength, but to keep up an interest. The pupil must have something to look forward to—something to struggle with and to master. In no place can a system of physical culture be carried out better than in a well-disciplined college. Before the freshman class begins gymnasium work every member should be examined physically, as he had previously been examined mentally before entering college. Then, instead of putting all in one class, and adapting the prescribed exercises to the capacity of the weakest, grade the class according to the needs of its individual members, and arrange the exercises to correspond. Those with flat chests and consumptive tendencies should be put in one squad; those with weak backs and slender waists in another; those with strong bodies, but undeveloped limbs, in a third; and so on, until the whole class has been divided into squads composed of men of like capacity, and requiring similar treatment. The duration of this special training would, of course, depend upon the condition of each student, and should be left to the discretion of the instructor. After personal deficiencies have thus been corrected, the students should be transferred to the regular gymnastic class, and the members of this class should be led on from one piece of apparatus to another, until all the popular appliances of the gymnasium have been brought into service. By changing the course of instruction from term to term, and allowing some freedom of choice, a lively interest could be maintained which would add greatly to the benefit of the exercise. At the close of the first year the class should be examined in their work, and be grouped the next year according to their proficiency. The books of the director should be open to inspection, and the vital statistics of each man recorded at the beginning of the year could be compared with those taken at the close. By such a system the physical condition of every student in college could be readily ascertained, and the value of regular and progressive exercise be put to the test. The course that we have described is essentially practicable—is, indeed, substantially that pursued at Harvard University—and we believe it to be the only one by which the gymnasium can be made to minister to the wants of all, and its exercises rendered educational.

As a rule, students take about the same rank in required gymnastics that they do in their regular studies. Whether this is due to a superior ability or to a better *morale* we will not attempt to say. But we can say that those who fail in their studies, for want of application or habits of attention, will be likely to fail in gymnastics for the same reason. Mental characteristics always manifest themselves in physical exercises. We mention this in order to dispel the idea so generally entertained, that, in the so-called physical exercises, brute strength always predominates. Brain and nerve-substance is behind every well-controlled muscular movement. Indeed, the two are so closely connected that it is hard to tell what is due to the mind and what to the body.

In the system which we propose, we do not leave out of consideration boating, base-ball, and other popular pastimes. But we would have them regarded as recreative exercises, and as such taken during the hours allotted to pleasure and relaxation. So far as they go, they afford the best kind of development; but, to those who pursue these sports vigorously and earnestly, gymnastics must come in as a corrective. They should be put through a course adapted to bring into action the muscles which their particular pastime has left unemployed. By such a method the gymnasium is made not only a school of physical training, but a school of moral discipline. The accomplishment of difficult feats may not in itself amount to much, but the required development, the habits of self-control, and the rapid and responsible exercise of judgment which is so frequently called for, are powers gained, and cannot fail to be of service to a man in any vocation in life.

In looking over the whole field of physical sports and games we can find nothing so well adapted to the complete muscular education of youth as the exercise of a well-appointed, well-conducted gymnasium. Every variety of apparatus can be introduced, all the movements can be arranged in a progressive series, and the entire system can be adjusted to meet and remedy the physical defects of each individual student. The times are ripe for action on this subject. Public thought is turning to it as never before. People are asking with growing earnestness, if nothing can

DR. NICHOLS' PENNY VEGETARIAN COOKERY-BOOK.—Every household should possess this marvel of cheapness. Free for 1½d.—NICHOLS & Co., 23, Oxford-street, London, W.—[ADVT.]

help them to resist the destructive wear and waste of American business life. When insanity and the hundred forms of nervous diseases are on the increase, and when thousands of our educated young men are falling out in the battle of life for the want of strength and vigour, there is room for anxious questioning about our methods of physical training. Help must come from some source. And the suggestions which we have briefly offered in the present article we believe will secure the approval, because they will appeal to the reason, of intelligent thinkers.

Girls' Playgrounds.—There is one most unaccountable want in very many girls' schools in our cities. If boys need play, fresh air, games, muscular development, I have no hesitation in saying that girls need them all to the extent applicable to their constitution and strength still more. For boys will have them to some extent. If you don't give a boy a playground he will play on the street, which is better than no play. Now the exigency of public opinion will not allow our young ladies to amuse themselves on the streets; and if not, how are they to get the fresh air and muscular exercise that are absolutely necessary for their health and proper development?—*Dr. Clouston.*

A Queer Story.—Dr. de la Pommerais, says the Paris *Figaro*, was executed in June, 1864, for a murder of the Palmer type. On the night before his execution he was visited by Surgeon Velpeau, who, after a few preliminary remarks, informed him that he came in the interests of science, and that he hoped for Dr. de la Pommerais's co-operation. "You know," he said, "that one of the most interesting questions of physiology is as to whether any ray of memory, reflection, or real sensibility survives in the brain of a man after the fall of the head." At this point the condemned man looked somewhat startled; but professional instincts at once resumed their sway, and the two physicians calmly discussed and arranged the details of an experiment for the next morning. "When the knife falls," said Velpeau, "I shall be standing at your side, and your head will at once pass from the executioner's hands into mine. I will then cry distinctly into your ear: 'Couty de la Pommerais, can you at this moment thrice lower the lid of your right eye, while the left remains open?'" The next day, when the great surgeon reached the condemned cell, he found the doomed man practising the sign agreed upon. A few minutes later, the guillotine had done its work, the head was in Velpeau's hands, and the question put. Familiar as he was with the most shocking and ghastly scenes, he was almost frozen with terror as he saw the right lid fall, while the other eye looked fixedly at him. "Again!" he cried frantically. The lids moved, but they did not part. It was all over.

Medical and Sanitary Exhibition, 1881.—Award of Merit.—Diabetes. Van Abbott's Gluten Bread, and all other suitable Foods for Diabetic Patients. Dietary Tables and Price Lists post-free on application. Van Abbott, 5, Princes-street, Cavendish-square, W.—Delicate Children and Adults Suffering from Nervous Depression. Van Abbott's Hypophosphite of Lime Biscuits, for Delicate Children, especially those suffering from Deficiency of Bone, Weak Joints, or Debility, and Adults suffering from Nervous Depression. Each Biscuit contains five grains of the Hypophosphite of Lime. "Quite free from disagreeable taste, and taken willingly by Children, and certainly provide an excellent means of administering this valuable compound. Our analysis proves the accuracy of the printed descriptions on the labels of the boxes. The Biscuits were suggested by Mr. W. Adams, of the Orthopædic and Great Northern Hospitals." — *Lancet*, Nov. 4, 1876.—Van Abbott, 5, Princes-street, Cavendish-square.—[Advt.]

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

Wiesen as a Health-Resort in early Phthisis (Consumption). With Directions for Clothing, Diet, and Exercise in the Swiss Alps during winter. By A. T. Tucker Wise, M.D., L.R.C.P., M.R.C.S., &c. (London: Baillière, Tindall, & Cox.). 1883.

Although nearly half a century has passed since an English medical man (Dr. Bodingson) first recommended the trial of cold pure air for cases of chest complaint, it is only within late years that the advantages of such treatment have been fully recognised by the profession, and yielded to by those who suffer from the above delicacy. The number of such persons who now seek restoration to health in the high altitude of the Alps, for instance, is increasing every year, and there is little doubt that many patients derive more benefit from the bracing atmosphere of such places than they would do from the mild and relaxing climates, which at one time were all but universally insisted upon for consumptive subjects. It follows, then, that as this system becomes more popular, the greater amount of information we can receive regarding these health-resorts in high altitudes the better. To all who are interested in the matter, we can heartily recommend the above little book by Dr. Wise, as containing much useful information and many practical hints to those who think of spending the winter in the pure, keen air of the Engadine.

Dr. Wise introduces us to the subject in hand by pointing out the beneficial influence which bright, clear, cold, and a still atmosphere are known to have on the bodies and spirits of English people accustomed to a climate which is, to say the least, unreliable, and which, for at least nine months of the year, rings the changes on fogs, cold winds, and rains, with an occasional bright day between! To any one removing from such a climate to the bracing region which is here recommended, the change is most exhilarating, and at first almost intoxicating—so strong and fresh and sweet is the air which he breathes into his unaccustomed lungs.

Those who are unacquainted with high altitudes in winter—says Dr. Wise—may perhaps be inclined to judge the sensations at a high, cold region from an English standard of cold; thinking possibly that twenty degrees of frost signifies twenty degrees of chilliness, and that any temperature below freezing-point would be likely to cause discomfort to delicate persons. A brief explanation may tend to correct this view.

The explanation which follows, being somewhat technical, we omit; but Dr. Wise goes on to say, in language which all can understand:—

If, therefore, cold, motionless, dry air surrounds the body, heat is not abstracted nearly so readily as it would be by somewhat warmer air in motion. . . . In the high valleys of the Alps, although the thermometer may register some 15 or 20 degs. of frost, this low temperature is by no means disagreeable, as the calm air and intense solar heat enable many persons to sit in the open air and bask in the sun during the depth of winter.

And again:—

The exhilarating feeling produced by the consciousness of moving about amid snow and ice without taking cold or feeling pinched, is not to be despised, as contributing towards cure. The contrast of this with the life of a consumptive in England during winter, where every change of weather has to be guarded against, is so marked that the hope of recovery presents itself, and despondency is banished. There is every reason to suppose that under the many favourable circumstances presented by these climates, the treatment of suitable cases of consumption and affections of the chest

can be undertaken with greater confidence, and those measures which have of late years prolonged many valuable lives in England are certainly most likely to be efficient and successful, when supported by the curative effects of mountain air.

At the same time, Dr. Wise is anxious to prevent patients having too high an expectation of the benefits to be derived from a season spent in high altitudes; and in order to induce them to continue the necessary precautions in personal management, *after* having left these places, he quotes a statement made by Dr. Spengler, of Davos Platz, of which we venture to give a rough translation :—

"A physician residing at Davos has observed, during a practice extending over thirty years, that not only are the death-rates, and sanitary conditions generally, most favourable among the inhabitants of this valley, but that cases of pulmonary consumption in particular are completely unknown; or, at least, are extremely isolated. On the other hand, he has seen several natives of Davos, such as pastry-cooks, café-keepers, and the like, who, after having exchanged the life of their valley for that of some of the large European towns, have returned to Davos with all the symptoms of consumption. But after having breathed their native air for a while, their health has improved, and finally has become completely re-established. The news of these recoveries was quickly followed by the arrival of a number of invalids; and if the success which has crowned their sojourn at Davos has not been quite so rapid as in the case of those who were natives of the valley, it can hardly be said to be less happy or less complete."

It would appear from these observations (Dr. Wise remarks), that a prolonged existence in Davos does not carry with it an immunity from phthisis, even in presumably healthy persons with little or no hereditary predisposition to the disease. How much more, then, must "cured" patients be liable to a return of pulmonary symptoms. When are these likely to develop themselves? When does the expanded chest shrink again? These are questions which will be answered, no doubt, by increased experience of Alpine climates.

Dr. Wise, in his description of Wiesen as a health-resort during winter, presents to us a most fascinating picture. Situated nearly 5,000 ft. above the sea-level, sheltered by mountain ranges from all cold winds, and lying fair to the sun, this little Alpine village forms a pleasant resting-place within reach of much that is grand and picturesque. The pine-covered slopes, the deep-cut gorge, at the bottom of which flows the foaming Landwasser, and around and above all the snow-covered mountain-peaks, glistening against the bright blue sky, combine to make a picture which must charm the most exacting.

A variety of attractive walks can be had in the neighbourhood. Limiting enumeration to a few within a short distance, the descent to the Janisberg Brüche far exceeds all others in beauty. After repeated windings through a larch-wood, a view is obtained of an undulating ravine, densely overspread with dark green firs, stretching away to the Albula valley. The sound of the Landwasser becomes more distinct through the trees, and a few turns brings one abruptly on to the bridge. The bridge itself is built of pine, and has the sides and roof of the same material. It spans the chasm without any central support, and some rough engineering skill is evident in its construction. The spectator avails himself of a small hole, cut on either side, permitting a sight of the yawning abyss beneath. To project the head and peer down at the Landwasser is most fascinating, and well worth the half-hour spent in making the journey. After leaving the bridge, a few turns to the right will afford a fine front view of the Bäreuritt. In this direction the return trip can be prolonged through the pines towards Ziegelhütte, returning to Wiesen by the Landwasser road, occupying about one hour and a quarter.

Another walk which deserves special attention is to the Grosser Wasserfall. Passing through the village of Wiesen, distant about 200 yards from the hotels, and hidden from view by its position, the road makes several turns, and crossing one or two mountain torrents reaches an open pasture. Traversing this, and entering the forest, the waterfall is discovered in a secluded glade, affording a pretty glimpse at the peak of the Zinzenhorn.

Other excursions might be named which could be undertaken on foot or by sleigh. In the western division of the village are two hotels, each of which can accommodate from thirty to forty persons. Up to the present time mostly summer guests have frequented the place, but arrangements are now made to receive those whose health compels them to reside at a high altitude during the winter season. The proprietors furnish good cuisines, and the quality of the food compares very favourably with that at Davos, while the cost of living is less.

An important item in the advantages of a health-resort is, undoubtedly, good drinking-water. The supply of the Wiesen hotels is both excellent and wholesome. Coming from the high snowy range of the Sandhübel, and passing through the rocky soil beneath, the springs are led through pine-tree tubes to a tank on the hill, and thence by iron pipes to the hotels.

The water itself is without odour or flavour, and has a bright, sparkling appearance from the carbonic acid taken up in the interstices of the rocky soil, through which the springs percolate. Although deprived of its oxygen in winter, by freezing when falling as snow, it becomes sufficiently aërated in its course from the springs to the tank.

Dr. Wise gives some very useful advice and directions with respect to the clothes which should be worn in these high altitudes during winter, so as to be conducive to health as well as comfort. In the very first place, he advises ladies who seek restoration to health from lung disease to give up wearing corsets altogether. This advice will, no doubt, be unpalatable to some who practise the uncomfortable and pernicious mode of encasing themselves in a species of stiff armour, in spite of the many warnings held out to them for years by all medical men who understand the danger they incur. But we may hope that no ladies who desire to gain much benefit from residing in the high altitudes of the Alps will be foolish enough to handicap so heavily their chances of recovery by neglecting to follow Dr. Wise's advice in this matter. The slightest consideration will suffice to show how important a part is played by the very muscles which are fettered and confined in their movements by a tight-fitting corset; while the free play of the lungs in breathing is limited to short labouring gasps, which are totally insufficient to replenish with air the respiratory organs.

The substitutes for corsets should be a thick flannel waistcoat or jersey. Flannel should also be worn next the skin, over the trunk and extremities. Chamois leather may be substituted when over-sensitiveness of the skin renders the use of flannel unbearable; generally, however, a fine texture can be procured which is not too irritating. A good stock should be taken, as frequent changes are beneficial. The coverings for the feet and legs require attention. In all cases woollen socks or stockings are indispensable. Flannel pants should be made long enough for socks to be drawn over them. By enveloping the whole body in flannel, the patient is spared the necessity of loading the exterior with thick weighty dresses or overcoats, which fatigue the wearer and confine the act of respiration.

A few words of advice about the prevention of chilblains will prove useful to many who suffer from those "minor but troublesome ailments," even without leaving home. In the first place, walking exercise immediately after breakfast is prescribed, in order to get the feet warm for the day. Also the wearing of thick woollen socks and cloth gaiters, and boots which are neither too thick nor inelastic.

Ordinary stout skating boots with broad toes, low heels, and plenty of room inside them, which may be filled up with a cork sole, are suitable for ladies as well as gentlemen; they should be well greased every day, and always changed immediately after a long walk.

As a prophylactic against chilblains, bathing the feet in salt and water, avoiding tight boots, and changing the socks whenever the feet are damp from perspiration, &c., will carry many through the winter of a cold climate, who might otherwise suffer much inconvenience and pain.

Goloshes are not recommended for constant use, though they are warm and useful to wear on a short journey. Grey is given as the best colour for all clothes, as "a light colour does not absorb nor radiate heat so much as black." Another very sensible remark made by Dr. Wise is that waistcoats should be lined with flannel throughout, as, by the present mode of garments, a man may have four times the number of layers across his chest that he has on his back. Fur tippets for ladies are not recommended as being healthy, as they cause the shoulders to become overheated, and therefore liable to catch cold on being uncovered. Dr. Wise has appended a short list of articles which may be found serviceable for these climates.

In a chapter on the diet which is required in the Swiss Alps, Dr. Wise reminds us of the necessity which exists in cold climates of consuming animal fats, in which, as a rule, the cuisines of Swiss hotels are very much wanting.

It is essential to the health and well-being of individuals that a proper proportion of nitrogenous and non-nitrogenous food should be consumed. The latter consists chiefly of starch, fats, sugar, saline substances, and water, which in the ordinary way with meats form the mixed dietary most suitable for man, as the structure of his teeth and past experiences indicate . . . . As a general rule, few delicate persons would be capable of effectually digesting the quantity of bread, pastry, milk, and root vegetables, &c., which would be requisite to constitute with the meat eaten a fair combination of nitrogenous and non-nitrogenous matter; and as there is a marked absence of palatable fat at these places, a little consideration of the means for balancing the needful combination will conduce to the recovery of health, and avert many ill-effects arising from perverted nutrition—as dyspepsia, troubled sleep, a loaded tongue, &c.

Cod-liver oil is also highly recommended; and to those who find this objectionable the advice is given to eat butter at every meal, and cream is also to be indulged in. These rules of diet can be modified to each case as common sense and experience dictate. This may also be said of the rules laid down for exercise, meals, sleep, &c. As Dr. Wise remarks, much will depend on the state of health and capability for exertion. One rule, however, is given to all, viz., keep as much in the open air as possible. This chapter on personal hygienic management is written chiefly for those who are not so ill as to require constant medical supervision. Beginning the day at 6.30 or 7 a.m. by drinking warm new milk, and rising in time to partake of breakfast at 8.30 or 9 a.m., the patient should go out for a walk, returning about 11 a.m. for another glass of warm milk. Care must be taken never to permit breathlessness nor fatigue, nor in any case should the body be allowed to cool quickly if perspiring. In the afternoon skating, coasting, walking, or sleighing may be indulged in; also "tobogganning" for those who are vigorous enough. Lawn-tennis is also played, but is suited only for the strongest. The dinner-hour varies in different hotels; and the evening is spent in various ways—amateur theatricals, concerts, readings, &c.

Dr. Wise gives it as his opinion that most people should not return home direct from the Alps, when the end of winter seems to be approaching. There are many places within reach, either in Italy—as Sorrento, Lugano, or Como—or on the shores of Lac Léman, where it would be well to wait before setting out for England.

The rest of Dr. Wise's interesting little book is taken up with a weather journal of Wiesen, in which the notes taken by different observers are compared with the climates of St. Moritz and Davos; and after studying the different meteorological tables appended, one would certainly feel inclined to give the preference to Wiesen as a health-resort during the winter season.

PERFECT DAYLIGHT.—Use CHAPPUIS' Reflectors, 69, Fleet-street.—[ADVT.]

THE Missouri State Board of Health has prepared a circular containing quarantine regulations and directions to be pursued by county courts in dealing with small-pox and other contagious diseases. It recommends the placarding of all houses where contagious diseases exist, the notification of schools within the vicinity of cases of small-pox, the general vaccination of school-children and adults, and the removal of patients to an hospital provided specially for the purpose, or, when such cannot be done, the strict isolation of the house or houses in which the disease exists.

APPLICATION FOR THE REMOVAL OF SCARS.—

℞—Borax ..... ℥ iss.
Salicylic acid..... gr. xij.
Glycerine ..... ℥ iij.
Rose water ..... ℥ vj. M.

Lint soaked in this solution and allowed to remain some little time each day, will frequently mitigate the visible results of burns, small-pox scars, ringworms, &c.

LUNGS AND AIR.—In the course of 24 hours about 2,000 gallons of air pass through our lungs; and we have seen that the air thus expelled from them is unfit to support life—nay, even that it is highly poisonous. It not only contains carbonic acid gas, but some other organic matters that are much more deleterious. It has been ascertained by direct experiment that air containing respiratory impurity, measured by an addition of only two parts of carbonic acid per 10,000 of air, is the limit of such impurity that can be allowed to be present if we are to remain in health. But in order to attain this standard, no less than 3,000 cubic feet, or 10,000 gallons of air per hour must be available, and well mixed with the air breathed. In other words, by our breathing we spoil 120 times more of air than we can use in our lungs, and instead of only 2,000 gallons, we need 240,000 gallons of air every day of our lives.

ONE of the first really practical writers on the subject of hygiene was the well-known Ludovico Cornaro, a noble Venetian, who, after a youth of intemperance and excess, reformed his ways, and kept so strict a watch over his diet and habits, that he prolonged his life to the age of a hundred years, dying in April, 1566. Various writers followed Cornaro—few of them of much note except the famous Jerome Cardan, one of the most learned physicians of the Renaissance, but somewhat whimsical in his hygienic views. Of the other masters of the period, Thomas Philologus, of Ravenna, is worthy of mention, on account of his strong protest against intramural interment, thus anticipating by some three centuries the happily fruitful labours of our distinguished countryman, Edwin Chadwick. The next writer of eminence was the celebrated Sanctorius, a Professor of Padua. He wrote a work on health, entitled "Medicina Statica," and he also began the era of exact observation by his experiments with the weighing chair, by which he endeavoured to show the weight of the insensible perspiration. The aphorisms in his book are couched in quaint and even fantastic language, but many of them are sound when stripped of the vagueness and mannerism of the time.

Sanitary Appliances, Etc.

BUCHAN'S PATENT INDUCED CURRENT FIXED VENTILATORS.

IF some one could invent a really self-acting exhaust ventilator that would act equally well in all weathers and situations, and for all purposes for which ventilation is required, he would merit the title of a benefactor to humanity. No one has done so as yet, nor, we fear, is likely to do it until an equally clever inventor is able to make a sailing-vessel go as well as a steamer independent of or against both wind and tide.

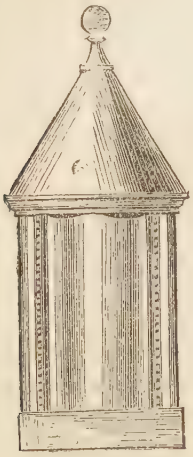

Fig. 1.

Fig. 2.

Notwithstanding their general disability to compete in many ways with steamers, sailing-vessels in practice are found to be useful, and equally so as regards wind-acting ventilators, although, of course, they are not to be depended upon to work so well always when wished as mechanically driven ones. Yet a good wind-acting ventilator when properly fitted up like a good sailing-vessel is found to be a most useful and valuable appliance—the wind being

Fig. 3.

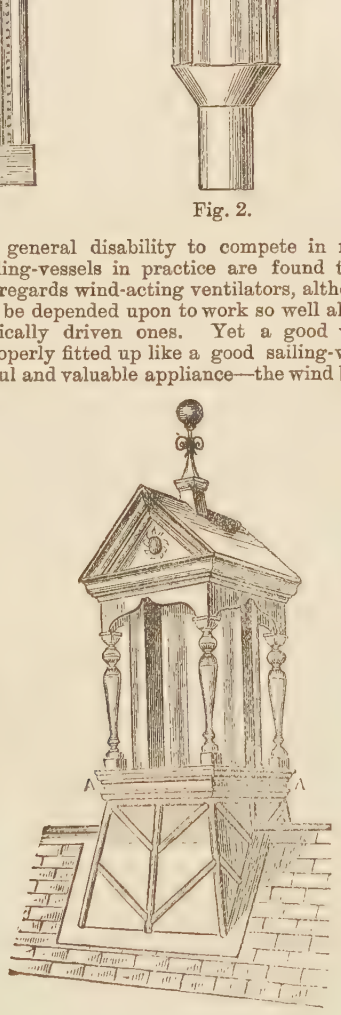

Fig. 4.

a much cheaper motive-power than coals, &c. Amongst all the ventilators in use which have been practically experimented with and tested, the Induced Current Fixed Ventilator, patented by Mr. W. P. Buchan, of Glasgow, holds a foremost place. In a very elaborate series of comparative tests with the principal cowls and ventilators in the market, conducted by Mr. S. S. Hellyer, of London, and described and recorded in the second edition of his book "Dulce Domum," published by B. T. Batsford, London, the author says:—"Taking all the tests into consideration, the palm of victory must be given to Mr. Buchan's."

From its construction the Induced Current Ventilator has not only a strong exhaust power when acted upon by the passing wind, but in cases where there is an inclination to down-draught in the ventilating pipe, upon which it is fixed, this tendency is especially combated, and it is no unusual circumstance for the Induced Current Ventilator to be sucking up when others in the same position would be allowing down draught.

These ventilators are all "Fixed," so are not liable to get out of order. They are made in a variety of styles and to suit various purposes.

Three styles are here illustrated for use in buildings. The No. 1 (Fig. 2), in its smaller sizes, is used for ventilating soil-pipes, drains and sewers, &c. The No. 2 (Fig. 1) is largely used for halls, schools, churches, hospitals, &c.; or where the extra cost is allowed, No. 7 or some of the other ornamental styles are used in place of No. 2. The No. 7 style (Fig. 4) is just being applied in the new Hospital for Incurables at Morningfield.

The flat-topped ventilator (Fig. 3) is used for ships, yachts, &c. It has been adopted lately by the engineers of the Clan Line of Steamers for the last four additions to their fleet, and reported upon most favourably by Captain Rule, of the *Clan Macarthur*, for their working during both the outward and homeward voyages to and from Calcutta.

The Ventilators themselves, and all information regarding them, may be had from the Patentee, Mr. W. P. Buchan, Sanitary Engineer, 21, Renfrew-street, Glasgow.

Our Letter: Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 74-76, *Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to* "THE PUBLISHER," *at the same address.*

Contributors are requested to send stamps for the return of the MSS. *in event of non-acceptance. Every care will be taken to ensure the safety of* MSS., *but the* EDITOR *and* PUBLISHERS *cannot hold themselves responsible for accidental loss.*

Correspondents are requested to write on one side of the paper only The EDITOR *disclaims responsibility for the opinions expressed by Correspondents.*

LETTERS TO THE EDITOR.

PARENTS' DUTIES AND HEALTH.

SIR,—The following statement of facts may not be without interest to your readers, and I trust that their publication may do some good as a warning to parents and others not to neglect *first symptoms* of illness in their children.

I live in the most healthy situation in an extremely healthy suburb of a large and healthy town. Not only is the death-rate of the locality remarkably low, but the Medical Officer of Health, who has known it for more than fourteen years, informs me that he has never known any disease become epidemic in the place. At present, however, measles are rife, and became so under the following circumstances:—There is a school here, with about fifty boys in attendance, two of my own among them. The parents of a boy, A., allowed him to go to school one day while very poorly. Next day measles developed itself unmistakably in A. while he was at school, and he was subsequently kept at home. *The mischief, however, had been done;* the poison-seeds had been sown, and, after several days' incubation, fifteen boys, or *a third of the school*, were ill of measles. This happened just before the "breaking up" of the school for the Christmas holidays, and the annual festivities in connection therewith were seriously interfered with. Moreover, measles was thus carried into fifteen houses, and in many cases, my own amongst the number, the boys' sisters and brothers caught it. Thus, then, through indifference (if nothing worse) on the part of the parents of A., the Christmas family gatherings of fifteen families were entirely stopped, and numbers of little people, who had been long looking forward to what is, *par excellence*, the children's festival, were deprived of all their expected enjoyments, and obliged to eat a Christmas dinner (?) of "slops."—I am, Sir, yours faithfully,

AN ANGRY FATHER.

December 29, 1883.

A TEACHER'S JUST GRIEVANCE.

SIR,—During the last few days, I have been made painfully aware of the need that exists for your invaluable paper. If the laws of health are so little understood among the upper middle classes, the aggregate of ignorance must be vast indeed. In the hope that a brief mention of a few facts may serve a useful purpose, I trouble you with this note. I am the head-master of a school of fifty boys, situated in a healthy country place near a large and healthy town. The boys are the sons of merchants and professional men. One of these boys, living in a village at some distance from the school, has infected nearly a third of his school-fellows with measles, simply through neglect on the part of his parents of ordinary precautions. The boy had been ailing some days. He was not under my immediate supervision, and I was not made aware of it; but in spite of this he was allowed to attend school, until the symptoms of measles were too evident to be mistaken. Of course, the boy's parents erred in ignorance; and I feel certain that this is not a solitary instance of the bad consequence resulting from a neglect of first symptoms. For some days after the boy had ceased to attend school no other cases occurred; but, by the end of the second week, nine boys were attacked, and the number subsequently increased to fifteen—the whole number, I believe, of boys in the school who had not previously had the complaint. As a consequence, our Christmas concert was interfered with, some Cambridge Local Examination candidates were compelled to forego their examination, the "Christmas joys" of a number of young people were spoiled—for I have left out of my enumeration sisters and other members of the families who were attacked. Thirty parents have been compelled to spend a somewhat anxious Christmastide, and not a little trouble has been occasioned to AN AGGRIEVED SCHOOLMASTER.

CHILDREN'S DRESS.

SIR,—In No. 36, page 165, of your journal, the following words occur, which, I think, require some explanation on the part of the authoress, Miss Ada S. Ballin:—"After that time (till the child begins to walk, say, two years old) the boot should be *made* exactly to fit the foot, and of a soft, yielding kid, so that there shall be no pressure on any part, while *there is no room allowed for the foot to become deformed by spreading.*"

Perhaps Miss Ballin would explain her ideas respecting the usefulness of a boot in preventing deformity of the foot, and say, also, if she thinks that the feet of all children who do not wear shoes such as she describes, or who do not wear shoes at all, are deformed. I should also be glad to learn any ideas she entertains respecting the necessity for applying close-fitting articles of attire to prevent deformity. Does she think that a close-fitting corset is necessary to prevent a young lady's figure from becoming deformed? Her reply would, I have no doubt, be most edifying to all your readers, and I hope she will favour us with an answer to the foregoing.—I am, yours faithfully, H. MAXWELL.

Liverpool, Dec. 31, 1883.

QUERIES AND ANSWERS.

We would direct the attention of our correspondents to the fact that, owing to the necessity for sending HEALTH to press early in the week, answers to queries cannot, as a rule, appear in the succeeding number of the journal. Every effort is made to secure punctuality in the replies, but we must ask the occasional indulgence of our readers, owing to the large amount of correspondence, which requires assortment and reply.

We must also request correspondents who write enclosing stamps for copies of HEALTH, to address their inquiries to the Publisher, *and not to the Editor.*

Correspondents will please note that Queries addressed on Postcards are consigned to our waste-paper basket. If information is worth having, it is at least worth a letter.

We beg to announce to our correspondents that, save in exceptional cases, or where addresses of medical men, &c., are desired, we cannot reply to inquiries by letter.

GENERAL.

VIS.—Thanks for your letter and pamphlet enclosed. We intend to resume the subject shortly; but, as you can readily understand, it does not suit our purpose to make any topic *de trop.* We agree with you, that the quack-subject deserves the attention of our legislators. This has all along been our contention, and the medical journals have been reiterating a similar assertion for years back. The new Medical Bill, however, will likely contain provisions making the quackery now rampant an offence against the law. At present, quacks can distribute their filthy literature broadcast (in London at least) without hindrance.

CUISINE.—We shall endeavour to act up to your hint. Thanks for your note.

GLASGOW.—Not at present.

B. AULD.—The ingredients are given in page 82.

J. CORKRAN.—About 20 per cent.; but less may be used.

OGILVIE.—See reply to "Vis," above.

ELGIN.—Dr. Wilson's Lectures on Anatomy and Physiology will be delivered in due course in England. The "Combe" Lectures have not, as yet, been given in England.

AUSTIN H.—"Pronation" means the turning of the forearm so that the palm is turned downwards or backwards. In Supination the palm is turned upwards or forwards.

ELLA.—It contains lead. Dangerous to use.

B. C. G.—The *Rodents* or gnawing animals.

SANITARY.

ABLEWHITE.—We advise you to give either "Sanitas" or "Chloralum" a trial. In the case you mention the smell of Carbolic Acid would most likely prove highly nauseous and offensive (though in no sense injurious) to the patient. "Sanitas" can be had in powder or fluid.

JOSEPH ANDERSON.—We shall publish articles on "Earth Closets" shortly; and we also expect to print particulars of a new invention which may suit your views.

INDEPENDENT.—You have no power under the Act.

B. A.—The Terebene Soap is valuable as an ordinary soap, and may be used with advantage in baths given to patients recovering from infectious diseases. Calvert's "Carbolic Soap," and Wright's "Coal Tar Soap" are also excellent.

MECHANIC.—You must have the flooring removed and examined. The smell of which you complain seems to proceed from rotting wood. From what you say, we think you will find the waste water escapes, causes wood-decay, and thus raises the odour you mention.

OLGA.—See reply to "B. A." above. For toilet purposes "Pear's" excels all. It is a fine soap, devoid of all colouring and extraneous matter.

QUIRK.—You will find what you require at 23 and 24, Charing-cross, London, W.C.

INTENDING PURCHASER.—1. The "Edinburgh Sewer Trap" should suit you (28, Upper Priory, Birmingham). 2. Maignen's "Filtre Rapide" is that regarding which you inquire. Address, Great Tower-street, London, E.C.

W. DIXON.—Wilson's "Handbook of Sanitary Science" (Churchill), Parke's "Hygiene" (Churchill), Corfield's "Health" (Kegan, Paul, & Co.), Corfield's "Laws of Health" (Longmans).

MEDICAL.

HOPE.—We should advise you to take a teaspoonful of Fellows' "Syrup of the Hypophosphites" thrice daily before food, in a wineglassful of water. (By no means think of taking any other tonic; that you name we have no confidence in.) In addition to the tonic, we should advise you very strongly to make a stay at the sea-side, or take a sea voyage. The south of England would suit you best. If you suffer from "chronic catarrh" (which is doubtful), you suffer also from aphonia (or loss of voice). As this to you is a serious matter, we shall be glad, if desired, to send you (on receipt of stamped addressed envelope) the name of a physician in Edinburgh who makes the throat a special study, and who will examine your throat and give you a reliable opinion. Before doing so, try the above tonic, and, above all, don't despair.

CO. DOWN.—We should advise you to give the tonic above prescribed to "Hope" a trial. Your diet should include more vegetables; and in place of the pills try "Æsculap" or "Friedrichshall Mineral Water" in the morning. Morson's "Pepsine" taken along with your food should also aid you. Glad to be of any further service. Take plenty of open-air exercise.

D. G.—The author of the pamphlet is a duly-qualified medical man. There is nothing new in his mode of treatment by inhalation; this mode is, in fact, practised daily by physicians. We think you may, if you feel disposed, give his system a trial. See our own recipes for inhalations given to "Mignon," HEALTH, No. 35. Electricity is of no use in your case.

W. MARTIN.—The preparation you name may safely be used for darkening the hair. Use it with the oil. See to your general health. Attend also to your food; avoid vegetables for a time; and rest after eating especially. For the rheumatic pains rub in hot oil and use hot salt baths.

H. C. E.—In our opinion, your case is simply one for wise dietetic treatment. For a time let well-nigh all your food be light and nutritious. Take Brand's "Beef Essences," "Soups," &c., milk, light-boiled eggs, and avoid tea and coffee. Take a little good claret at dinner; no other stimulant; and a little Morson's "Pepsine" with food will also be advisable. For the sleeplessness, we should recommend a tepid bath taken before going to bed occasionally, and free exercise through the day. Let us hear how you are in a few days' time. Glad to be of further service.

A. W.—Glad our advice has so far relieved your indigestion. Continue to be careful in diet and you will outgrow your troubles. The perspiration in the feet is only a sign of a little lowness of tone. Bathe the feet in alum and water, and take for a few days in trial the tonic recommended to "Hope" above.

T. R. M.—The "lumps" you speak of are "wens." They will do you no harm; but, if you desire their removal, a surgeon can easily and (by means of ether applied to the skin as an anæsthetic) painlessly accomplish this. The surgeon you name will be fully able to advise you in every way.

SCALP.—You might try a lotion as follows:—Liquor subacetate of lead, one drachm; glycerine, three drachms; water, to make up six ounces. Label: "Poison; for outward use only." Let us hear how you are in a few days. See to your health, and send particulars of general condition. The skin-disease is probably a symptom of lowness of your system.

ALCHEMIST.—We shall make inquiry and reply in this column when we have obtained definitely the recipe for which you ask.

H. E. H.—Can only be obtained from any druggist who manufactures it on a large scale. You could distil water at home by means of a simple apparatus, which any optician or philosophical instrument maker would provide.

AN ANXIOUS MOTHER.—We have no confidence in the remedy you name. It is not in repute in this country. See our advice to "Marjory" in No. 39 HEALTH. The condition to which you refer is rather a symptom than a disease. Glad to be of any further service if advice above indicated is not found to be sufficient. We suspect in the case you name there is some special condition requiring medical examination. Try *Fer Bravais*, 10 drops thrice daily.

CLEVELAND.—1. Probably you are constitutionally thin. Try cod-liver oil; a dessertspoonful thrice daily after meals. Limit exercise, and rest. 2. Apply to the manager of any of the steamship companies. At Hull there are several to whom you might make application. 3. Clothe warmly, and attend to general health. You should wear a flannel belt. The air is bracing; and, if you are in good health, should suit you.

SENEX.—Yours is a case for careful attention to the general health. We should advise a short trial of the tonic prescribed to "Hope" in present number. Rub the legs with warm oil at night.

DRAFTSMAN.—No evidence of abnormal "growth," such as you fear. Try the following:—Citrate of iron and quinine, a drachm and a half; carbonate of ammonia, two drachms; tincture of orange peel, two ounces; water to make up six ounces. A tablespoonful thrice daily.

SWEETNESS.—There could be no harm in trying Pulvermacher's belts, which are genuine appliances, and likely to do you good. You seem to be troubled with a nervous affection (or affections), which have produced general derangement of your system. We can only repeat here, that you must exercise care in food taking (try Morson's "Pepsine" with your food); and if your symptoms continue, we should advise a consultation with a London physician, whose address we will be glad to send you if desired.

FROU FROU.—We cannot recommend any plan except judicious dumb-bell and trapeze exercises.

EARNEST.—Take the tonic recommended to "Hope" in present number. Have plenty of out-door exercise, and, above all, don't be morbid. If you can bear cold-water sponging each morning, give this a trial.

J. T.—Are you inclined to be gouty in any way? The great toe is often affected in this disease. Try rest and roomy boots. If the pain continues, describe your health more fully, and we will advise.

OPERÆ PRETIUM EST.—Give up vegetables for a time, and try Morson's "Pepsine" along with your food. Rest after meals, above all.

ESPOIR ET DÉSESPOIR.—You have evidently run the gauntlet of medicine and medicines. You appear to us to be over-sensitive, and inclined to be morbid. You show no evidence of ill-health, and what you name is rather natural than otherwise, if not in excess. Take the tonic recommended to "Hope" in present number, and see also advice to "Earnest" above. Above all, be cheerful, and give up gloomy thoughts.

A VICTIM TO ASTHMA should continue to take the tonic he mentions for a time. It will do good in the direction he indicates. Glad to be of any further service, if required. The "Pepsine" should be taken along with meals, as directed. Morson's "Pepsine" is a reliable preparation.

W. C. GOULD.—We do not understand what you mean by "physical" acne. Ordinary "acne" is a disease in which certain ducts of the skin are plugged up by their secretion—forming the so-called "worms" in the face, or "blackheads." We should recommend you to steam the face at night, and to apply vigorous friction thereafter with a flesh-brush or hard towel; while you may also use the following lotion: Sulphur, three drachms; glycerine, four drachms; rectified spirits of wine, to make up four ounces. Rub in at night.

H. T. W.—Add Tidman's "Sea Salt," or Brills' Salt, to an ordinary bath, and have the water as hot as it can conveniently be borne. There is no cheap work on baths; but we intend shortly to have a series of papers on "Baths and Bathing" in HEALTH.

SILVER TRUMPET.—The cause is due usually to some error in diet. You should attend very carefully to your food, and see that your digestion is good. Avoid all stimulants, and take "Æsculap" mineral water or "Friedrichshall" as a mild aperient occasionally. If not better, write again.

HENRY HALEY.—Try the effect of rubbing in warm oil to the affected parts at night. Bathe the painful parts in hot salt water occasionally. In your living avoid stimulants (beer, &c.), and clothe warmly.

F. S.—1. Yes; your treatment was on the whole fair; but you would have done quite well without the mercury and with potass iodide. 2. We do not think the acne had anything whatever to do with the original affection. We do not believe in the connection between acne and the treatment you name. 3. No; port wine would not ordinarily be given in the case you name. All stimulants in such a case are, in our opinion, injurious, and create a craving (*vide* your own case) impossible to satisfy. 4. A purely nervous affection, due possibly to some peculiarity of your system as affected by alcohol. 5. The effect of coffee and tea is possibly in your case similar to that of alcohol—only, bear in mind, you are treating a body which, from your own showing, has had a surfeit of alcohol. 6. We do not think you suffer now from your original affection. Our earnest advice to you now is, to drop all stimulants; to attend to your warmth and nutrition; to take occasionally a little iodide of potass (two drachms to six ounces of Calumba infusion—a dessertspoonful thrice daily). The person you name is not a qualified medical man. His quack pamphlets are sufficient evidence of the nature of his calling.

SOLLA.—See paragraph on excessive perspiration in HEALTH Vol. I (see Index). In such a case as yours, the excessive perspiration is often a symptom of a little lowness of system. Try the effect of bathing the hands now and then in a saturated solution of boracic acid. A tonic (such as that prescribed to "Hope" in present number) taken for a day or two only may brace you up and cure you. If not better, write again.

X. Y. Z.—Your symptoms are those of general health-derangement. The more special matter to which you refer is an indication that probably you suffer from some slight internal affection. See and follow advice to "Marjory" in HEALTH, No. 39. If not improved by such simple treatment, we should advise a medical consultation, which, in cases like yours, is often absolutely necessary.

B. M.—You do not give a specific description of the skin affection; nor do you state how or when it appears, and how long it persists, or whether there is any eruption, &c. Kindly furnish these particulars.

ALPHA BETA.—1. Give up the medicine now, and endeavour so to regulate your life in every way—diet, exercise, &c.,—that you will not require further drugging. 2. For the sleeplessness trust most to open-air exercise; but if you should take anything try fifteen grains bromide of potass in a wineglassful of water on each alternate night for a week. 3. We believe the person you name is a duly qualified medical man. We know nothing of his treatment or reputation. 4. Trust to good health for return of brain-power.

JOHN SMITH.—Thanks for your good wishes. See advice for "acne," or "blackheads," given to "W. C. Gould" in present number of HEALTH.

EPIDERMIS.—Are your coats (or dresses) easy enough under the armpits? See that no chafing is allowed to exist; bathe the skin with a solution of alum and water; thereafter use a little plain Vaseline as an application. Write again if not better.

AN ANXIOUS FATHER.—1. For the skin affection we should recommend you to take mild aperients ("Æsculap," or "Friedrichshall Water"), to avoid stimulants and heating food, and to dust the affected parts with a powder consisting of three parts starch and one part oxide of zinc. You might also paint the pustule before it breaks with collodion. If not better, write again. 2. For

[*Continued on page* 240.

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'Why so very very merry,
Is it purity of conscience, or your one-and-seven sherry?'

I refrained, however; and he presently explained. 'I have been revelling this morning,' he said, 'in a new pair of spectacles:' which struck me as almost as odd as revelling in one-and-seven sherry, till he explained that for years he had been troubled by ill-suited spectacles, and that 'our friend Mr. Browning' had at a first trial provided him with a perfect pair.

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he other affection you name we should recommend cooling lotions and a suspensory bandage. Take also the tonic recommended to "Hope" in present number.

A. SPENCER.—1. Take the tonic recommended to "Hope" in present number of HEALTH for a time as an experiment. It may possibly relieve all your symptoms, and you certainly seem to require a tonic. 2. See reviews of recent books on "Cookery" in HEALTH. 3. The chilliness is due to weak health. When you get up to par the cold will leave you. 4. Sleep with the feet on a pillow, and bathe legs and feet occasionally in hot salt and water. Glad to hear from you again as to effect of treatment.

WILLIAM.—Take a little "Æsculap" mineral water in the mornings occasionally, and avoid all pills and other purgatives. Let your food be light and nutritious for a time: soups, fish, milk, light boiled eggs (no beer or coffee, and mostly fluid foods), and take a little "Pepsine" with the food. Rest after meals especially.

PSORIASIS.—You suffer from an obstinate skin-disease, the nature of which is to take a lengthy time to cure. Why should you fear its being known? That thought is a highly foolish one. If you send us a stamped addressed envelope, we think we can put you in the way of obtaining a sound medical opinion, under circumstances which will suit your case. We know nothing of the author of the pamphlet you enclose.

J. K.—The affection you name is not uncommon, and depends on a variety of circumstances. As a primary recommendation we should recommend you to try the effect of mildly aperient mineral waters, avoid stimulating food, and employ, as a local application, oxide of zinc ointment. Let us hear how you are shortly, as the affection is somewhat intractable, and we may be able to recommend something suitable if required.

STYX.—Don't be despondent. First of all, you should know that the occurrence you name (unless occurring too frequently) is often a criterion of robust health. Only quacks allege the contrary. Take the tonic recommended to "Hope" in present number of HEALTH. Use cold sponging in the morning, sleep on a hard mattress, and avoid fluids late at night. For constipation use "Æsculap" water. You appear to lay at the door of your other troubles the special weakness of which you complain. You will recover perfectly by attention to above, provided always you are cheerful.

MISFORTUNE will find in the early monthly parts of HEALTH papers on the "Hair," which he should peruse carefully. If not relieved thereby he should write again.

A DEVONIAN.—See advice to "Styx" above.

ARCTURUS.—See and follow advice to "Styx" above, and don't despond. Glad to be of further service, if necessary.

T. TURNER.—From your account of your case we imagine you are cured. What you now require is a course of careful tonic medicine. Try *Fer Bravais* (fifteen drops thrice daily in water), and let us hear how you are in fourteen days or so.

G. HARRINGTON.—1. No fear of any such result as that you name. 2. Pay attention to your general health. 3. A hard mattress simply will suffice.

HEINRICH.—No medical man can possibly say that meat is bad for either young or old engaged in severe work. The contrary opinion, is that which is scientifically correct. You should have plenty of solid, rich food—meat, fish especially, eggs, milk, &c. If you underfeed when engaged in severe exertion, you will assuredly break down. Let your breakfast consist of milk, porridge (if it agrees with you), or cocoa and milk, and bread with light-boiled eggs or fish. For dinner have soup, a moderate allowance of meat and ordinary vegetables, or fish in place of meat on certain days, with milk-puddings, &c.; and, for tea, take milk and bread, or cocoa, in preference to tea itself.

ERNEST (Shrewsbury).—What do you call "very frequent?" See remarks to "Styx" above. If these do not answer your case, write again. Thanks for good wishes.

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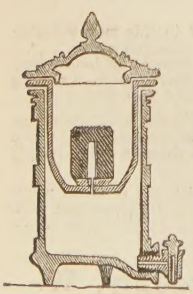

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